

In the claims:

1. A mobile communication base station device which conducts radio communication with a plurality of mobile apparatuses connected to an ATM network, comprising:

5 a wireless unit which conducts modulation and demodulation for communicating with a mobile apparatus through a wireless channel,

10 a coding and decoding unit which conducts coding into a wireless channel format for the communication through the wireless channel or conversely conducts decoding,

a channel control unit which conducts control such that a band of an ATM channel has a band instructed by a channel Qos management unit,

15 a wireless channel state monitoring unit which obtains state information of the wireless channel from said wireless unit and said coding and decoding unit to conduct monitoring, and

20 said channel Qos management unit which gives a channel control instruction based on the state information of the wireless channel notified by said wireless channel state monitoring unit to use a band of the ATM channel appropriate for the state of the wireless channel.

2. The mobile communication base station device as

set forth in claim 1, wherein

said channel Qos management unit

instructs said channel control unit to set

5 priority to each data received from the plurality of  
mobile apparatuses according to a state of each wireless  
channel through which the data in question is  
transmitted and received and conduct relay through said  
ATM channel based on the priority in question.

10

3. The mobile communication base station device as  
set forth in claim 1, wherein

said coding and decoding unit, at the time of  
decoding data received from said wireless unit, stores  
5 time when the decoding is started and at the time of  
relaying data to said channel control unit, transfers  
the data together with said time information, and

said channel control unit conducts control to  
abandon data whose delay exceeds a delay time designated  
10 by an instruction from said channel Qos management unit.

4. The mobile communication base station device as  
set forth in claim 1, wherein

said channel Qos management unit

instructs said channel control unit to set

5 priority to each data received from the plurality of  
mobile apparatuses according to a state of each wireless  
channel through which the data in question is

transmitted and received and conduct relay through said ATM channel based on the priority in question,

10           said coding and decoding unit, at the time of decoding data received from said wireless unit, stores time when the decoding is started and at the time of relaying data to said channel control unit, transfers the data together with said time information, and

15           said channel control unit conducts control to abandon data whose delay exceeds a delay time designated by an instruction from said channel Qos management unit.

5.       A Qos control method in a mobile communication base station device having a wireless unit which conducts modulation and demodulation for communicating with a mobile apparatus through a wireless channel, a coding and decoding unit which conducts coding into a wireless channel format for the communication through the wireless channel or conversely conducts decoding, and a channel control unit which controls an ATM channel band to execute radio communication with a plurality of mobile apparatuses connected to an ATM network, comprising the steps of:

          obtaining state information of the wireless channel, and

          giving a channel control instruction based on the obtained state information of the wireless channel to use a band of the ATM channel appropriate for the state

of the wireless channel.

6. A Qos control method in a mobile communication base station device having a wireless unit which conducts modulation and demodulation for communicating with a mobile apparatus through a wireless channel, a coding and decoding unit which conducts coding into a wireless channel format for the communication through the wireless channel or conversely conducts decoding, and a channel control unit which controls an ATM channel band to execute radio communication with a plurality of mobile apparatuses connected to an ATM network, comprising:

a wireless channel state monitoring step of obtaining state information of the wireless channel from said wireless unit and said coding and decoding unit to conduct monitoring, and

a channel Qos management step of giving a channel control instruction based on the state information of the wireless channel notified by said wireless channel state monitoring step to use a band of the ATM channel appropriate for the state of the wireless channel.

7. The Qos control method as set forth in claim 6, wherein

said channel Qos management step instructs said channel control unit to set

5 priority to each data received from the plurality of  
mobile apparatuses according to a state of each wireless  
channel through which the data in question is  
transmitted and received and conduct relay through said  
ATM channel based on the priority in question.

10

8. The Qos control method as set forth in claim 6,  
further comprising:

a delay time management step of controlling said  
coding and decoding unit to, at the time of decoding  
5 data received from said wireless unit, store time when  
the decoding is started and at the time of relaying data  
to said channel control unit, transfer the data together  
with said time information, and

10

a data abandonment control step of controlling  
said channel control unit to abandon data whose delay  
exceeds a designated delay time.

9. The Qos control method as set forth in claim 6,  
wherein

said channel Qos management step

instructs said channel control unit to set

5

priority to each data received from the plurality of  
mobile apparatuses according to a state of each wireless  
channel through which the data in question is  
transmitted and received and conduct relay through said  
ATM channel based on the priority in question, and which

10 further comprises:

a delay time management step of controlling said coding and decoding unit to, at the time of decoding data received from said wireless unit, store time when the decoding is started and at the time of relaying data to said channel control unit, transfer the data together with said time information, and

a data abandonment control step of controlling said channel control unit to abandon data whose delay exceeds a designated delay time.

20

10. A Qos control program in a mobile communication base station device having a wireless unit which conducts modulation and demodulation for communicating with a mobile apparatus through a wireless channel, a coding and decoding unit which conducts coding into a wireless channel format for the communication through the wireless channel or conversely conducts decoding, and a channel control unit which controls an ATM channel band to execute radio communication with a plurality of mobile apparatuses connected to an ATM network, comprising:

a wireless channel state monitoring function of obtaining state information of the wireless channel from said wireless unit and said coding and decoding unit to conduct monitoring, and

a channel Qos management function of giving a

channel control instruction based on the state  
information of the wireless channel notified by said  
wireless channel state monitoring function to use a band  
20 of the ATM channel appropriate for the state of the  
wireless channel.

11. The Qos control program as set forth in claim 10,  
wherein

said channel Qos management function  
instructs said channel control unit to set  
5 priority to each data received from the plurality of  
mobile apparatuses according to a state of each wireless  
channel through which the data in question is  
transmitted and received and conduct relay through said  
ATM channel based on the priority in question.

10 12. The Qos control program as set forth in claim 10,  
which executes:

a delay time management function of controlling  
said coding and decoding unit to, at the time of  
5 decoding data received from said wireless unit, store  
time when the decoding is started and at the time of  
relaying data to said channel control unit, transfer the  
data together with said time information, and

a data abandonment control function of  
10 controlling said channel control unit to abandon data  
whose delay exceeds a designated delay time.

13. The Qos control program as set forth in claim 10,  
wherein

said channel Qos management function

instructs said channel control unit to set

5 priority to each data received from the plurality of  
mobile apparatuses according to a state of each wireless  
channel through which the data in question is  
transmitted and received and conduct relay through said  
ATM channel based on the priority in question, and which  
10 further executes:

a delay time management function of controlling  
said coding and decoding unit to, at the time of

decoding data received from said wireless unit, store  
time when the decoding is started and at the time of

15 relaying data to said channel control unit, transfer the  
data together with said time information, and

a data abandonment control function of  
controlling said channel control unit to abandon data  
whose delay exceeds a designated delay time.

20